Amendments to the Claims:

Please amend claims 103, 106 and 114 as indicated below. This listing of claims will replace all prior versions and listing of claims in the application:

Listing of Claims:

1 – 102 (Cancelled)

103. (Currently amended) A composite core for an electrical cable comprising:

an inner core comprising a plurality of substantially continuous reinforcing fibers of at least a first type, the first fiber type having a tensile strength that exceeds the tensile strength of glass fibers; [[and]]

an outer core comprising a plurality of substantially continuous reinforcing fibers of at least a second type, the second fiber type having a tensile strength of or similar to glass fibers; and

a resin matrix, wherein the fibers of the inner and the outer cores are embedded [[in]] therein;

wherein, the fibers of the inner core are different from the fibers of the outer core, and wherein the fibers of the inner and the outer cores are oriented substantially parallel to the longitudinal axis.

104. (Previously presented) A composite core as claimed in claim 103 wherein, the first fiber type is carbon.

105. (Previously presented) A composite core as claimed in claim 103, wherein the second fiber type is glass.

106. (Currently Amended) A composite core as claimed in claim 103 wherein, the first reinforcing fiber type in the inner core comprises a modulus of elasticity in the range of about 22

(151 GPa) to 37 Msi (255 GPa) coupled with a coefficient of thermal expansion in the range of about -0.7 to about 0 m/m/°C and a tensile strength of at least about 350 Ksi (2413 MPa) and the second reinforcing fiber type in the outer core comprises a tensile strength in the range of at least about 180 Ksi (1241 MPa) coupled with a coefficient of thermal expansion in the range of about 5×10^{-6} to about 10×10^{-6} m/m/ °C.

107. (Previously Presented) A composite core as claimed in claim 103 wherein, the composite material of the inner core and the outer core is selected to meet physical characteristics in the end composite core including a tensile strength of at least 160 Ksi (1103 MPa), a modulus of elasticity in the range of at least about 7 Msi (48 GPa) to about 30 Msi (206 GPa), an operating temperature in the range of about 90 to about 230 °C and a thermal expansion coefficient at least in the range of about 0 to about 6×10^{-6} m/m/°C.

108. (Previously Presented) A composite core as claimed in claim 103 comprising a fiber/resin volume fraction in the range of at least about 50%.

109. (Previously Presented) A composite core as claimed in claim 103 comprising a fiber/resin ratio of at least about 62% by weight.

110. (Previously Presented) A composite core as claimed in claim 103 wherein, the inner core comprises carbon fibers and the outer core comprises glass fibers.

111. (cancelled)

112. (Previously Presented) A composite core as set forth in claim 103 wherein, said outer core and said inner core form a segmented concentric core.

113. (Previously Presented) A composite core as claimed in claim 103 wherein, at least one layer of a plurality of aluminum segments is wrapped around the core.

114. (Currently Amended) A composite core for an electrical cable comprising:

a plurality of reinforcing fibers in a thermosetting resin matrix to form the core, said core having at least 50% fiber volume fraction, the plurality of reinforcing fibers consisting of two or more different types of fibers, a first fiber type having a modulus of elasticity in the range of about 22 (151 GPa) to 37 Msi (255 GPa) and a tensile strength at least about 350 Ksi (2413 MPa) and a second fiber type having **[[a]]** a modulus of elasticity in the range of about 6 Msi to about 11.2 Msi and a tensile strength of at least about 180 Ksi (1241 MPa); wherein, the fibers are arranged within the resin matrix having the higher tensile strength fibers in the center of the core.

115. (Previously Presented) A composite core as claimed in claim 114 wherein, the first reinforcing fiber type is carbon.

116. (Previously Presented) A composite core as claimed in claim 114, wherein the second reinforcing type is glass.

117. (Previously Presented) A composite core as claimed in claim 114 wherein, the proportion and type of fibers are selected to meet physical characteristics in the end composite core including a tensile strength in the range of at least 160 Ksi (1103 MPa), a modulus of elasticity in the range of at least about 7 (48 GPa) to about 30 Msi (206 GPa), an operating temperature in the range of about 90 to about 230 °C and a thermal expansion coefficient at least in the range of about 0 to about 6×10^{-6} m/m/°C.

118. (Cancelled)

119. (Previously Presented) A composite core as claimed in claim 114 comprising a fiber resin ratio of at least about 62% by weight.

120. (Previously Presented) A composite core as claimed in claim 114 wherein the first fiber type forms an inner core and the second fiber type forms an outer core that surrounds the inner core.

121. (Previously Presented) A composite core as claimed in claim 120 wherein, the inner core comprises carbon fibers and the outer core comprises glass fibers.

122. (Previously Presented) A composite core as claim in claim 114 wherein, the core is segmented.

123. (Previously Presented) A composite core as claimed in claim 114 wherein, at least one layer of a plurality of aluminum segments is wrapped around the core.

124. (Previously Presented) A composite core for an electrical cable comprising:

an inner core consisting of a plurality of substantially continuous reinforcing fibers, the fibers having a tensile strength that exceeds the tensile strength of glass fibers;

an outer core surrounding the inner core consisting at least in part of a plurality of substantially continuous reinforcing glass fibers; and

a cured resin matrix, wherein the fibers of the inner and the outer cores are embedded therein;

wherein, the fibers of the inner and the outer cores are oriented substantially parallel to the longitudinal axis.

125. (Previously Presented) A composite core as claimed in claim 124 wherein, the fibers of the inner core are carbon.

126. (Previously Presented) A composite core as claimed in claim 124 wherein, the inner core comprises carbon and basalt fibers.

127. (Previously Presented) A composite core as claimed in claim 124 wherein, the fibers of the inner core have a modulus of elasticity in the range of about 22 to about 37 Msi.

128. (Previously Presented) A composite core as claimed in claim 124 comprising a fiber/resin volume fraction in the range of at least about 50%.

129. (Previously Presented) A composite core as claimed in claim 124 comprising a fiber resin ratio of at least about 62% by weight.

130 – 132 (Cancelled)

133. (Previously Presented) A composite core as claimed in claim 124 wherein, at least one layer of a plurality of aluminum segments is wrapped around the core.

134. (Cancelled)

135 – 147 (Cancelled)

148. (Previously Presented) A composite core for an electrical cable, comprising:

an inner core comprising a plurality of reinforcing carbon fibers and at least a portion of a plurality of reinforcing fibers having a tensile strength in excess of glass fibers;

an outer core surrounding the inner core comprising a plurality of glass fibers; and

a cured resin matrix, wherein the fibers of the inner and the outer cores are embedded therein;

wherein, the fibers of the inner and outer cores are oriented substantially parallel to the longitudinal axis.

149. (Previously Presented) The composite core as claimed in claim 148, wherein the fiber having a tensile strength in excess of glass fibers is basalt.

150 – 154 (Cancelled)

155. (Previously Presented) An electrical cable comprising:

a composite core further comprising:

an inner core comprising a plurality of substantially continuous reinforcing fibers of at least a first type, the first type having a tensile strength that exceeds the tensile strength of glass fibers, wherein the fibers are substantially parallel to the longitudinal axis;

an outer core comprising a plurality of substantially continuous reinforcing fibers of at least a second type, the second type having a tensile strength of or similar to glass fibers, wherein the fibers are substantially parallel to the longitudinal axis; and

a cured resin matrix, wherein the fibers of the inner and the outer cores are embedded therein; and

at least one layer of conductor surround said outer core.

156 – 157 (Cancelled)

158. (Previously Presented) An electrical cable as claimed in claim 154 wherein, the composite material of the inner core and the outer core is selected to meet physical characteristics in the end composite core including a tensile strength of at least 160 Ksi (1103 MPa), a modulus of elasticity in the range of at least about 7 Msi (48 GPa) to about 30 Msi (206 GPa), an operating temperature in the range of about 90 to about 230 °C and a thermal expansion coefficient at least in the range of about 0 to about 6 x 10^{-6} m/m/°C.

159. (Previously presented) An electrical cable as claimed in claim 154 wherein, the composite core comprises a fiber/resin volume fraction in the range of at least about 50%.

160. (previously presented) An electrical cable as claimed in claim 154 wherein, the composite core comprises a fiber/resin ratio of at least about 62% by weight.

161. (Previously Presented) An electrical cable as claimed in claim 154 wherein, the fibers of the inner core are carbon and the fibers of the outer core are glass.

162. (Previously Presented) An electrical cable as claimed in claim 154 wherein, the conductor surrounding the core comprises a plurality of aluminum segments.

163. (Previously Presented) An electrical cable as set forth in claim 154 wherein, the composite core is segmented.

164. (Previously Presented) A method of transmitting electrical power comprising:

using a cable comprising a composite core and at least one layer of aluminum conductor surrounding the composite core, the composite core further comprising:

an inner core comprising a plurality of substantially continuous reinforcing fibers of at least a first type, the first type having a tensile strength that exceeds the tensile strength of glass fibers, wherein the fibers are substantially parallel to the longitudinal axis;

an outer core comprising a plurality of substantially continuous reinforcing fibers of at least a second type, the second type having a tensile strength of or similar to glass fibers, wherein the fibers are substantially parallel to the longitudinal axis; and

a cured resin matrix, wherein the fibers of the inner and the outer cores are embedded therein; and

transmitting power across the composite cable.

165 – 176 (Cancelled)